

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Previously Presented) A system for cloning input/output (I/O) devices connected to a network of an industrial control system, comprising:

a first network;

a plurality of I/O devices connected to said first network; and

a master computer coupled to said first network and including control software with an object oriented model for defining one of attributes, parameters and operations of said I/O devices,

wherein said master computer adjusts said one of attributes, parameters and operations in order to configure a first I/O device that is connected to said first network and wherein said master computer subsequently clones properties that include said one of attributes, parameters, and operations of said first I/O device in order to configure a second I/O device that is subsequently connected to said first network.

2. (Original) The system of claim 1 wherein said object oriented model includes a hierarchical class structure with inheritance properties.

Claim 3 cancelled.

4. (Currently Amended) ~~The system of claim 3 wherein said device class~~ The system of claim 1 wherein said hierarchical class structure includes a device class that includes a plurality of device types.

5. (Original) The system of claim 4 wherein said object oriented model includes at least one class level hierarchically below said device class.

6. (Original) The system of claim 5 wherein devices instantiated at said at least one class level inherit said one of said attributes, parameters and operations of said at least one class level and a device type of said device class from which said at least one class level depends.

7. (Original) The system of claim 4 wherein said device types include at least one of analog and digital devices.

8. (Original) The system of claim 1 wherein said control software includes a graphical user interface for interfacing said control software and cloning said I/O devices.

9. (Original) The system of claim 1 wherein said I/O devices include at least one of barcode readers, sensors, actuators, and motor starters.

10. (Previously Presented) A system for cloning input/output (I/O) devices connected to a network of an industrial control system, comprising:

a first network;

a second network coupled to said first network;

a first plurality of I/O devices connected to said first network;

a second plurality of I/O devices connected to said second network; and

a master computer coupled to one of said first and second networks and

including control software with an object oriented model for defining one of attributes and operations of at least one of said I/O devices on one of said first and second networks,

wherein said master computer adjusts said one of attributes, parameters and operations in order to configure a first I/O device that is connected to one of said first and second networks and wherein said master computer subsequently clones properties that include said one of attributes, parameters, and operations of said first I/O device in order to configure a second I/O device that is subsequently connected to the other of said first and second networks.

Claims 11-17 cancelled.

18. (Previously Presented) The system of claim 10 wherein said first and second networks are connected by a gateway.

Claims 19-20 cancelled.

21. (New) The system of claim 1 wherein said second I/O device object is created after at least one of said attributes, parameters, and operations of said first I/O device object is adjusted.

22. (New) The system of claim 1 wherein said master computer is coupled to said first network via a second network.

23. (New) The system of claim 1 wherein at least a portion of said first network is internal to an industrial site and at least a portion of said second network is external to and remote from said industrial site.

24. (New) The system of claim 1 wherein said master computer disconnects from said first network before modifying said second I/O device object.

25. (New) The system of claim 24 wherein said master computer connects to and sends said modified second I/O device object to said first network to configure said second I/O device.

26. (New) The system of claim 1 wherein said master computer selectively disconnects from either said first or said second network before modifying said second I/O device object.

27. (New) The system of claim 1 wherein said master computer at least one of clones said first I/O device object or modifies said second I/O device object externally and remotely from an industrial site that has said first I/O device.

28. (New) The system of claim 1 wherein said first I/O device is connected to said first network, and

wherein said master computer at least one of clones said first I/O device object or sends said modified second I/O device object via said second network to said first network.

29. (New) The system of claim 1 wherein said master computer creates said first I/O device object and sends said first I/O device object to said first network via said second network.

30. (New) The system of claim 10 wherein said master computer is selectively coupled to one of said first and second networks, and

wherein said master computer includes control software for defining one or more attributes and operations of at least one of said I/O devices on selectively one of said first and second networks.

31. (New) The system of claim 10 comprising:
a first master computer coupled to said first network and including software to configure one of said I/O devices; and

a second master computer coupled to said second network and including software to configure one of said I/O devices.

32. (New) The system of claim 10 comprising:

a first master computer coupled to said first network and cloning said first I/O device object to create a second I/O device object; and

a second master computer coupled to said second network and modifying said second I/O device object.